Revised

SITE BRIEFING REPORT

Richmond, Contra Costa County, California
EPA ID: CAD 009123456

1 SITE DESCRIPTION

1.1 Location

The Stauffer Chemical Company (Stauffer) site, also known as Imperial Chemical Industries Americas (ICI) and Zeneca, is located at 1200 and 1415 South 47th Street in Richmond, California (see Figure 1, Site Location Map). The 75-acre site is bounded on the north and east by Meade Street, to the south by a tidal marsh and San Francisco Bay, and to the west by 46th Street. The University of California Richmond Field Station borders the site to the west, in what is otherwise primarily an industrial area with nearby commercial and residential areas.

1.2 Overview of the Problem

Hazardous materials have been used, stored, and disposed of at the Stauffer site since 1906. Contaminants attributable to site operations have been detected in soils, sediments and water both on site and in the nearby tidal salt marsh. Soil samples collected on site reveal levels of arsenic, cadmium, lead, mercury, DDT, dieldrin, alpha-HCH, and PCBs above Region IX residential soil PRGs, and other contaminants at concentrations greater than three times background levels. Sediment samples from the salt marsh adjacent to the site revealed levels of the previously listed contaminants as well as copper, chlordane, DDD, DDE, endrin, beta-HCH, and lindane at levels exceeding background levels.

The PRP has addressed ongoing waste management practices extensively, but historical contamination has not been defined or remediated. The site has been an RWQCB-lead site since 1987 and the PRP has demonstrated willingness to participate in remedial activities, but activities to date have not addressed the significant pathways of concern identified above. Surface water, which supports several endangered species and a fishery, is the primary pathway of concern.

2 ACTIVITIES TO DATE

2.1 State Regulatory Activity

Although involved in regulatory issues, no state agencies are actively investigating the need for remedial action due to contamination attributable to the Stauffer site. The California Regional Water Quality Control Board , San Francisco Bay Region (RWQCB), has been the lead agency at

this site since it was referred to them in 1987 by the California Environmental Protection Agency (EPA). The site does not have State Superfund status.

The RWQCB currently is responsible for the NPDES permit for the site, and has been involved in the oversight of underground storage tank removals and remedial investigations, Toxic Pits Cleanup Act (TPCA) investigations, and a groundwater Solid Waste Assessment Test (SWAT).

The RWQCB was also oversaw the installation of a groundwater intercept and treatment system in 1980 for limited treatment of herbicides in shallow groundwater.

The Bay Area Air Quality Management District issued ICI two source permits for the plant research center and a stack at the manufacturing plant. The air quality permits required monitoring for total particulate and nitrogen oxides.

The California EPA Department of Toxic Substances Control (DTSC) conducted biannual plant inspections to determine compliance with state hazardous waste laws and regulations. The DTSC also issued permits for the disposal of extremely hazardous waste to the facility.

2.2 PRP Involvement

Zeneca, Inc., a division of ICI Americas, has been the site owner and operator since 1992. Other PRPs include Stauffer, which operated the site from 1897 until 1985; Chesebrough- Pond, which merged with Stauffer in 1985; and Unilever Corporation which purchased the Stauffer division in 1986 and operated it until its purchase by ICI Americas in 1990.

The site owner/operator(s) Zeneca/ICI Americas have demonstrated past willingness to participate in mitigative and remedial work on site. The PRPs studied and overhauled the wastewater management system, installed a system to eliminate dry weather discharges from plant outfalls, closed the Ag Yard Pond, relined all site ponds, removed underground storage tanks, replaced sections of the chemical sewer and installed a groundwater intercept and treatment system. Stauffer installed the groundwater intercept and treatment system, designed to halt migration of contaminants and remediate existing contamination, in 1980. PRPs have conducted sampling and investigations at the request of the RWQCB and Contra Costa County Health Department. The current operator performed an investigation in 1988 of evaporation ponds under TPCA, overhauled the wastewater treatment system in 1991, and submitted a report on groundwater conditions at the site to the RWQCB in 1992.

2.3 Other Influencing Factors

Related Site Sources

The Blair Southern Pacific Landfill (CAD 980496889) is located directly east of and adjacent to the site. A Preliminary Assessment for the Blair Landfill stated that the landfill should be addressed under Site Assessments/Site Inspections (PA/SIs) of the Stauffer site. Information on the Blair Landfill site suggests that the only known disposal of materials in the landfill was 6,200 tons of wastes generated by Stauffer and disposed of in 1971.

Immediately adjacent to the western boundary of the Stauffer site is the University of California, Berkeley, Richmond Field Station (CAD 980673628). The Field Station was formerly a research laboratory that handled hazardous materials and generated hazardous waste. The EPA Region IX laboratory is currently housed within the Field Station property.

The United Heckathorn NPL site (CAD 981436363) is approximately 2 miles west of the Stauffer site.

Public Attention

Currently, public attention is a limited influencing factor at the Stauffer site, although several community groups have previously expressed interest in the site. Citizens for a Better Environment issued a letter concerning groundwater contamination at the site in 1980. The Citizens Action League requested files on the site from DTSC in 1983, and the West Contra Costa County Toxics Coalition has had interest in hazardous waste issues in the Richmond area.

Environmental Justice

The City of Richmond has ongoing environmental justice projects near the site.

Land Use Issues

The San Francisco Bay Trail, heavily used for recreation, runs near the southern border of the site. The public has access to the tidal marsh adjacent to the site and has been observed to fish in the marsh.

Remedial Costs

Although no remedial planning or investigation has been done for this site, given the extent and magnitude of contamination, including wetlands contamination, reported in Preliminary Assessments, the remedial costs for this site are likely to be very expensive.

Other Factors

There appear to be no influencing factors related to political or tribal interest in the Stauffer site. The site is not a likely candidate for Brownfields redevelopment and there is no other federal involvement, either RCRA or non-RCRA, at this time.

3 HRS CONSIDERATION

3.1 Site Assessment Documentation

PAs/SIs/ESI Dates and Findings

Since site discovery in 1979, the PA/SIs listed in Table 3-1 have been completed for the Stauffer site.

Table 3-1: Summary of PA/SI for Stauffer Chemical Site

Report Type	Submitted By	Completion Date	EPA Decision
Preliminary Assessment	ICF Kaiser	06/01/87	H - High Priority
Preliminary Assessment	ICF Kaiser	05/01/88	NFA - No Further Action
Preliminary Assessment	URS, Corp.	07/22/92	H- High Priority
Site Inspection	URS, Corp.	07/14/94	H- High Priority

Table 3-2 is a summary of sampling conducted at the Stauffer site in conjunction with the above noted PA/SIs and other investigations performed by site operators.

Table 3-2: Summary of Sampling Conducted at the Stauffer Chemical Site

Date	Conducted By/For	Media Sampled				
		Ground Water	Surface Water	Air	Sediments	Soil
1992	URS/EPA SI				X	X
1991	Mark Group/RP UST Removal					X
1991	Mark Group/ RP SWAT	X				
1991	Mark Group/RP					X
1980-90	Stauffer	X				
1987/88	Anatec/RP TPCA		X		X	
1987	RP		X		X	
1987	Anatec/RP				X	
1986	SRI International/RP		X		X	
1985	Wildlife International/RP				X	
1984	Stauffer/ for NPDES		X			

Site Screening Checklist Date and Finding

A Site Screening Checklist was completed May 1997 by the Cal EPA DTSC. The site recommendation was for referral to the RWQCB, with which the EPA did not concur, classifying the site as "High priority site: EPA lead."

3.2 Contamination Matrix

Table 3-3 presents contaminants found on site for which there exist regulatory benchmarks or background level data. Several other chemicals for which regulatory benchmarks do not exist have been documented on site, such as thiophenol, Vapam, and diphenyl disulfide.

Table 3-3: Contaminant Concentration and Benchmark Values by Matrix (Shaded Areas Denote Sample Concentrations Which Exceed Benchmark Values)

Contaminant of Concern	Ground Water/ Drinking Water (µg/L)		Surface Water (µg/L)		Soil (mg/kg)		S((
	Sample	PRG1	Sample	FAWQS	Sample	PRG	Sampl
METALS							
Arsenic	280	0.45		360/1902	294	0.38	1,6(
Cadmium		18		3.7/1.02	15.5	9	14
Copper		1,400		17/112	1,310	2800	1,9:
Lead		0.0037		65/2.52	678	130	5(
Mercury		3.7		2.1/0.0122	30.2	6.5	10
PESTICIDES/PCBS							
alpha-Chlordane		0.052		2.4/0.00432	0.022	0.34	0.0:
gamma-Chlordane		0.052		2.4/0.00432	0.034	0.34	0.0
DDD		0.28		0.000833	0.17	1.9	0.1
DDE		0.2		0.000593	0.41	1.3	0.1:
DDT		0.2		1.1/0.0012	1.8	1.3	0.3
Dieldrin		0.0042		2.5/0.00192	0.052	0.028	0.0:
Endrin		11		0.18/0.00232	0.007	20	0.0
alpha-HCH (BHC)		0.011		0.00393	0.15	0.071	0
beta-HCH (BHC)		0.037		0.0143	0.035	0.25	0.0(
gamma-HCH (Lindane)		0.052		2.0/0.082	0.027	0.34	0.0
Aroclor-1248 (PCB)		0.0087		- /0.0142	0.64	0.066	0.1(

Table 3-3: Contaminant Concentration and Benchmark Values by Matrix (cont'd)

(Shaded Areas Denote Sample Concentrations Which Exceed Benchmark Values)

Contaminant of Concern	Ground Water/ Drinking Water (µg/L)		Surface Water (µg/L)		Soil (mg/Kg)		S
	Sample	PRG	Sample	FAWQS	Sample	PRG	Samp
PROPRIETARY PESTICIDES							
EPTC	7.0	910	190			1600	2
Butylate		1800	2			3300	
Molinate		73	950			1300	2
Napropamide		6500	14			6500	2
Pebulate		1800	89			3300	2
VOLATILE ORGANIC COMPOUNDS							
Benzene	55	0.39	51	1.23		0.63	
Chlorobenzene	1,550	39	260	6803		65	
Carbon tetrachloride		0.17	3	0.253		0.23	
Chloroform		0.16	47	5.73		0.25	
1,1-Dichloroethane		810	57			500	
1,1-Dichloroethene		0.046	1	0.0573		0.037	
Methylene chloride		4.3	2,200	4.73		7.8	
PCE		1.1	30	0.83		5.4	
TCE		1.6	40	2.73		3.2	
Toluene		725	1,000	6,8003		790	

1 US EPA Region IX Preliminary Remediation Goals

2 Federal Ambient Water Quality Standards - Maximum (Acute) Concentrations/Continuous (Chronic) Concentrations

3 Federal Ambient Water Quality Standards - Human Health (10-6 risk for carcinogens) for Consumption of Water and Organisms

4 Background Concentration